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Abstract

The study aimed to reveal the level of anxiety among kidney transplant patients at Wad Medani Hospital in central Sudan, and its relationship to some variables (anxiety level, gender (male/female), age, social status, educational level, duration of illness). The study used the descriptive approach. The study sample consisted of (20) patients undergoing kidney transplantation in Central Hospital in Wad Madani, The. study data were analyzed using the Statistical Package for the Social Sciences. (SPSS) The results show a high level of anxiety among the sample members. On the other hand, the study found no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due to gender (male/female)., and not the existence of differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation is due to age, The study also showed that there are no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due to the educational level (illiterate, primary, secondary, university).and there are no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due to marital status (married, single., Single, divorced). Finally, the results of the study showed no differences in the level of anxiety between chronic kidney disease patients undergoing kidney transplantation due to the duration of the disease. The study recommends the need to design and provide programs. Services Psychological and Guidance for the disease and their families, it also recommends intensifying psychological services within chronic kidney disease hospitals in Sudan, and providing home counselling services for patients, especially those who have undergone kidney transplants.

Keywords: Anxiety, Chronic Kidney Disease, Kidney Transplantation, Gezira State.

Introduction

Kidney failure is a condition in which one or both of your kidneys no longer work on their own. Causes include diabetes, high blood pressure and acute kidney injuries. Symptoms include fatigue, nausea and vomiting, swelling, changes in how often you go to the bathroom and brain fog. Treatment includes dialysis or a kidney transplant (Cleveland Clinic, (2023). Kidney disease is a significant worldwide public health problem. Acute kidney injury (AKI) and chronic kidney disease (CKD) are linked to high health care costs, poor quality of life, and serious adverse health outcomes (ISN, 2023). More than 850 people suffer from some form of million kidney disease, which is increasing every year. ASN, ERA-EDTA, and ISN have joined forces to raise awareness on the importance and impact of kidney diseases in the world. The article, "A single number for advocacy and communication – worldwide more than 850 million individuals have kidney diseases" highlights five key points regarding this hidden epidemic million people require dialysis or transplantation, although many do not receive these treatments due to lack of resources or financial barriers. Moreover, treating people with kidney diseases and kidney failure imposes a heavy financial burden on healthcare budgets, as the annual cost per patient for hemodialysis is (ASN&ISN:2024). Along with the patient's financial and physical suffering, there are psychological stresses that extend to him and his entire family. Chronic kidney disease is a multifaceted problem having both physical and psychological connotations for the patient. The patients suffering from renal failure often present with unusual psychological problems where treatment methods vary on an individualized basis and drug therapy is often needed in the management of such problems, The most common psychiatric complication occurring because of renal failure is depression in the patient and anxiety in the associated partner (Chen Y, 2003).Most dialysis patients who are employed may return to full-time work activity.(A De, Sousa, 2008)

CKD is one of the most common chronic diseases globally. Many studies have shown it is strongly associated with increased social and psychological problems such as depression and anxiety which are considered as common psychiatric disorders that occur in patients with chronic kidney disease. Moreover, the study of (Sameeha, Alshelleh, et al) 2022).

An estimated 8000 kidney failure patients in Sudan. All of whom required 70,000 dialysis sessions per month to stay alive, while approximately 4500 are need to kidney transplants, but disruptions in healthcare services, and a shortage of resources exacerbate their plight (EL Konozy, Ema Deldin, 2024), not only but also, there are Sudanese studies whose results indicate the presence of psychological disorders among

chronic kidney disease patients, such as the study of Fadl Al-Mawla, Halima (2019), whose results revealed, on a sample from the Al-Ailafon area, a high level of depression among kidney failure patients, and no differences in the degree of depression according to the variable: gender, duration of dialysis.

This study attempts to reveal the level of anxiety among chronic kidney disease patients undergoing kidney transplantation and its relationship with some variables such as (gender (male-female), marital status (married-unmarried), educational level, duration of illness,) in central Sudan.

Study problem:

Chronic kidney disease is one of the diseases that affect the life of the patient and his family and affects his social and professional life, and even family life. The effects of the disease are not limited to physical suffering, but extend to psychological effects, such as anxiety, depression, and mental health in general. This is confirmed by the study of (Ade, Sousa, 2008),) (Sameeha, Alshelleh, et al (Hegazi,2022), (Yalda Safai (2023),) Fadelmawla, Halima (2019), which requires knowing the psychological effects on chronic kidney disease patients who have reached the stage of needing a kidney transplant.

Patients' physical suffering increases when they need a kidney transplant due to fear of failure of the operation, lack of a donor, high treatment costs, and post-treatment follow-up. All of this transforms physical suffering into more psychological, economic, and social pressures. This study attempts to identify the psychological effects and the factors affecting them, such as: gender, age, educational level, social status, and duration of illness. All of this is likely to reveal the extent of suffering in chronic kidney disease and develop programs to help them. The importance of the problem lies in the following main question: What is the level of anxiety among chronic kidney failure patients undergoing kidney transplantation? The following sub-questions branch out from this question:

Are there statistically significant differences in the level of anxiety among kidney failure patients undergoing kidney transplantation due to gender (male, female)?

Are there statistically significant differences in the level of anxiety among patients with renal failure undergoing kidney transplantation due to age (15-20), (26-35), (36-45), (46-50)?

Are there statistically significant differences in the level of anxiety among kidney failure patients undergoing kidney transplantation attributable to the level of education (illiterate - primary - secondary - university)?

Are there statistically significant differences in the level of anxiety among kidney failure patients undergoing kidney transplantation due to marital status (married - unmarried - divorced - widowed)?

Are there statistically significant differences in the level of anxiety among patients with renal failure undergoing kidney transplantation due to the duration of the disease (less than a year - 1-3 years -4 - 5 - more)?

Importance of the study:

The importance of this study lies in revealing the level of anxiety among chronic kidney disease patients undergoing kidney transplantation. Detecting the level of anxiety and psychological stress of patients and their psychological suffering will facilitate the design of guidance programs that relieve their stress, improve their social and professional communication, and help the families of patients deal with them and participate in psychological support.

Also, revealing important variables related to anxiety such as: gender, social status, education level, age, and duration of illness helps in identifying the factors that most affect anxiety and psychological stress for kidney patients undergoing kidney transplantation, which makes guidance and treatment programs more specific in helping patients.**Study limitations:** The limitations of this study are: the level Anxiety between chronic kidney diseases under transplantation as an independent variable, and knowing the following dependent variables (gender, the age, level education, Social Statutes, duration illness).

Spatial boundaries: A sample of kidney failure patients undergoing kidney transplantation at the Central Hospital in Wad Madani, central Sudan.

Time limits: March-May 2023

Hypothesis:

1. The level of anxiety in patients with chronic renal failure who undergo kidney transplantation is high.
2. There are no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due to the gender (male, female).
3. There are no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due to the age (15-20),(26-35),(36-45),(46-50)?
4. There are no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due to level of education (My mom-basis-secondary-University)?

5. There are no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due marital status (married-unmarried-absolute-widower)?
6. There are no differences in the level of anxiety among chronic kidney disease patients undergoing kidney transplantation due to the duration of the illness (less from year-1- 3 years-4- 5-more)?

Literature Review:

Kidney disease and its treatment can make you feel physically unwell, which can affect your mental health and your ability to respond well to stressful situations. To add to this, if you are mentally unwell, this can worsen your kidney disease (American Kidney Found, 2023). Chronic kidney disease (CKD) is a multifaceted problem having both physical and psychological connotations for the patient. A multidisciplinary team effort is often needed in the management of such patients. Mental health professionals may need to collaborate with nephrologists for holistic management of such patients. The patients suffering from renal failure often present with unusual psychological problems (A De Sousa, 2008). psychiatric conditions including depression, anxiety disorders, and cognitive impairment are prevalent in patients with (CKD). Also, Miranda, Aline, et al, (2019) added that these conditions often make the quality of life worse and lead to longer hospitalizations and higher mortality. Over the past decades.

Anxiety:

Experiencing occasional anxiety is a normal part of life. However, people with anxiety disorders frequently have intense, excessive and persistent worry and fear about everyday situations. Often, anxiety disorders involve repeated episodes of sudden feelings of intense anxiety and fear or terror that reach a peak within minutes (panic attacks). These feelings of anxiety and panic interfere with daily activities, are difficult to control, are out of proportion to the actual danger and can last a long time. You may avoid places or situations to prevent these feelings. Symptoms may start during childhood or the teen years and continue into adulthood (Mayo Clinic ,2023). As well as American Psychological Association (APA) Dictionary define Anxiety as an emotion characterized by feelings of tension, anxious thoughts, and physical changes like increased blood pressure. Anxiety is not the same as fear, but they are often used interchangeably. Anxiety is considered a future-oriented, long-acting response broadly focused on a diffuse threat, whereas fear is an appropriate, present-oriented, and short-lived response to a clearly identifiable and specific threat. Moreover, the medical definition of anxiety assigns (such as tension, sweating, and increased pulse rate), by doubt concerning the reality and nature of the

threat, and by self-doubt about one's capacity to cope with it (APA Dictionary of Psychology). Anxiety is a natural response when you're facing a real or perceived threat. It's a feeling associated with your body's stress reaction, also known as your "fight, flight, or freeze" response. However, when anxiety becomes persistent or recurrent, it may manifest with a variety of symptoms and could affect your quality of life. The term "somatic" means "relating to the physical body" or "of the body." Experts use the term to describe physical states, medical conditions, functions, and treatments that focus on your physical self. When symptoms of anxiety appear as physical experiences, experts call it somatic anxiety. (Gillette, Hope, 2024). Some psychological studies associate chronic and serious physical diseases, especially with the length of the disease and the symptoms. Some studies association also, between anxiety and CKD, such as a study (Hegazi, Samia (2019), (Sameeha, Alshelleh, et al: (2022) Yalda Safai (2023), A De Sousa (2008), Fadelmawla, Halima, 2019)

Chronic kidney disease (CKD):

National Institute of Diabetes and Digestive and Kidney (NIDDK) defines chronic kidney disease (CKD) as, when your kidneys are damaged and can't filter blood the way they should. The disease is called "chronic" because the damage to your kidneys happens slowly over a long period of time. This damage can cause waste to build up in your body. CKD can also cause other health problems. Causes of Chronic Kidney Diabetes and high blood pressure are the most common causes of kidney disease. Your health care provider may do tests to find out why you have kidney disease. The cause of your kidney disease may affect the type of treatment you receive (NIDDK, 2023). Moreover, Chronic kidney disease, called chronic kidney failure, involves a gradual loss of kidney function. Your kidneys filter waste and excess fluids from your blood, which are then removed in your urine. Advanced chronic kidney disease can cause dangerous levels of fluid, electrolytes and wastes to build up in your body (Mayo Clinic, 2024). Signs and symptoms: foamy urine, urinating (peeing) more often or less often than usual, Itchy and/or dry skin, feeling tired, nausea, loss of appetite, weight loss without trying to lose weight, people who have more advanced stages of CKD may also notice:, trouble concentrating, numbness or swelling in your arms, legs, ankles, or feet, achy muscles or cramping, shortness of, vomiting breath, trouble sleeping, Breath smells like ammonia (also described as urine-like or "fishy" (National Kidney Foundation, 2023)

The relationship between chronic kidney disease (CKD) and psychological disorder:

The results of many studies indicate a relationship between chronic kidney disease and mental health disorder such as study of (Sameeha,

Alshelleh, et al: (2022) after investigating the prevalence of depression, anxiety and perception of quality of life in a sample of CKD disease patients at the Jordan University Hospital. The study aims to know association of the mental health in these patients; mainly depression and anxiety with their quality of life and correlation to socio-demographics or laboratory and metabolic profile of this population. More than half of the participants have depression and anxiety with a percentage of 58.3% and 50.5%, respectively. There was a negative moderate to strong correlation between depression score and quality of life domains scores ($p < 0.001$). Only marital status had a significant relationship with depression ($p < 0.001$). Weak positive correlation between Glomerular Filtration Rate and anxiety score ($p = 0.04$), with significant positive correlation between lipid profile and anxiety score. There was a negative correlation between anxiety score and quality of life domains scores. Females had higher anxiety score than males ($p = 0.27$). Patients who do not work had a lower physical functioning score compared to others (p value $= 0.024$). Patients with higher serum Hemoglobin had higher physical and psychological scores. Anxiety, Depression are common among our CKD patients, more interventions are needed to improve the mental health of patients and their quality-of-life perception (Alshelleh, Sameeha, et al: (2022). The study of Hegazi, Samia (2019) aimed to know the effectiveness of the application of the cognitive behavioral therapy program on the degree of improvement of anxiety and depression in patients with chronic renal failure - under hemodialysis in kidney disease treatment centers in the state of Khartoum and to know the relationship between the degree of improvement in anxiety and depression, the patient's age and the period for the onset of kidney failure disease. As well as knowing the differences in the degree of improvement in anxiety and depression that are attributed to gender, educational, social and occupational status, and desire and hope for the kidney transplant operation. (20-55) years. They were selected by stratified random sampling. The study achieved the most important results: the application of the cognitive behavioral therapy program achieved a substantial improvement in the degree of anxiety and depression in patients with chronic renal failure here is no statistically significant relationship between the degree of improvement in anxiety and depression resulting from the application of the cognitive behavioral therapy program on patients with chronic renal failure and the age of the patient, due to gender (male, female, due to educational status. The objective of Amanda Lee (2005) study was to assess the health-related quality of life (HRQOL) in patients with kidney failure Who had received renal transplants compared to those receiving hemodialysis, peritoneal dialysis or were waiting to start dialysis. The study was conducted at the University Hospital of Wales,

Cardiff. HRQOL was measured using the EQ-5D, SF-36 and the Kidney Disease Quality of Life questionnaire (KDQOL). The study achieved this Results: Of 1251 people surveyed, 416 valid returns were received, a response rate of 33%. For renal transplant patients the mean EQ-5Dindex was 0.712 (SD 0.272), significantly higher than those in the other treatment groups (hemodialysis mean = 0.443 (SD 317), $p < 0.001$; peritoneal dialysis mean = 0.569 (SD 329), $p < 0.001$). This difference remained after controlling for age and co-morbidity. Except for pain, the SF-36 showed significantly higher scores across all domains for transplant patients compared to both dialysis groups.

Study indicates Lech, Majdoliana (2023)Which aimed to know the relationship between CKD and personality traits after it was Use sample Composed of from 200 individual Of them (84)woman and (116) man, range their ages between(61 ± 12year): 160Sick in Stage G4-G5from illness Kidney chronic, And choose sample Officer from 40person.It was completed Use road Survey Diagnostic in Search Using Surveys Next To collect Data Social and demographics And clinical: confinement Behavior Healthy(IZZ), confinement Character(NEO-FFI), Beck For depression(BDI), Questionnaire researcher. I found the study differences between the same indication statistics in intensity features character in stages treatment different. It increases impact factors. The result on illness Kidney Chronic on Expression on features character with stages suffix from Treatment. Changed Characters Patients Who suffer from illness Kidney Chronic with Stages Suffix from treatment and were affected by factors Social and demographics and clinical. I influenced characters on frequency disturbances intermediate amount about her and behaviors health, study indicates Fadelmawla, Halima (2019) to depression in patients with renal failure was markedly high at Al-Ailfun dialysis Center. About (40 km south of Khartoum, Sudan), The results reached that there are differences between the pre-test and post-test scores in favor of the post-test. And the absence of differences in the degree of depression according to the gender variable (male-female), the age, Duration of continuation dialysis. However, the study of Hani, Ahmed, and Shrouida, Sarah (2017) Its results indicated the presence significant correlation in the psychological dimension between adaptation and stress management have chronic kidney disease. Differences in favor of wives, and the absence of correlational relationship A function in the psychological dimension between adaptation and stress coping for a sample Couples. While a study and a disagreement revealed, Freheka, Bokalphe (2017) In Algeria, the majority illness palaces renal chronic high blood pressure anxiety the future by percentage (59%), There is no differences same indication Statistics in anxiety the future I have Patients

Palaces Renal Come related to Variables (Sex (Males, Females), the age (-15-25, 26-40, 41-50,51) the social status (married, unmarried, absolute, widower) While study of Al-Ghafeeli ,Elaph (2018): aimed to know the no between depression and hardness psychology in patients with kidney failure In Riyadh, showed Its results to existence of no Negative correlation coefficient indication Statistics between Total score For depression and its sub-dimensions(side Cognitive-Emotional, side (physical)and the total score For hardness Psychology and its sub-dimensions(Commitment challenge, control)In patients with renal failure in Riyadh; There are differences in indication statistics in total score for depression for gender variable (male-female) and its sub-dimensions (side Cognitive _ Emotional, side (physical) For the benefit of Patients females; and no statistics differences in in total score for depression related to age depending on the situation patients who their categories age(61) years and above; and there are differences in indication Statistics in total score for depression accordingly for level educational, and the case Social; Sex for the differences in favor of males, While the study of Awadallah, Hala (2008) which dealt with antiquities failure renal chronic on the condition emotional, and compatibility social and psychological for patients the study aimed to discover the condition Cognitive they have.as done study impact program to improve the condition Psychological for patients, Included 40 Sick failure renal and 40from Healthy people as a sample Officer. And it resulted in the study on that Sample. The officer he put on better from Sample experimental component from patients' failure renal from where Their situation Cognitive And emotional, and it appeared variations Statistics Clear on degree big from Importance.as I explained the study differences It is reliable. Statistically between Patients before application the program and after that. As shown results of study that for illness failure renal Chronic Influential big on the condition Cognitive in all Responses, He suffers Patients from feeling sleepy attention Weakness the focus and remember Which Leads to Disorders Operations mentality.

The social support level of individuals with kidney transplants perceives increases, the symptoms of anxiety, depression, negative self, somatization and hostility decreases. These findings highlight that individuals with kidney transplants have good levels of mental states (Yaman Zeliha, 2017)

Methodology:

This study employs a quantitative design research method, and the aim of quantitative research is to determine the relationship between one variable (an independent variable) and another (a dependent or outcome variable) in a population (Hopkins, 2000). This study examines anxiety as

the dependent variable, and main independent variable in all its forms including (gender(male-female) , Age, social status, educational level, duration of illness). The choice of these independent variables is based on several previous studies that have shown their significance in impacting the relationship between anxiety and (CKD) such as studies of (Hegazi, Samia 2019) (Elkhfayl, Ielaf, 2018), (Fadal Elm Awla, Halima, 2019) (Sameeha Alshelleh, et al, (2022).

Population:

The population of this study includes both male and female of chronic kidney disease (CKD) in central Sudan, which includes the states of Gezira. Senna, and White Nile State. The number of those who have been diagnosed as CKD need to be transplanted in central Kidney Hospitals in Wad Madani city. They numbered (24) patients. This research was conducted in the Central Hospital of Wad Madani, which provides its services to the central states of central Sudan. Central Sudan is the political, geographic, cultural, and economic center of Sudan, Concerned with central Sudan, the area around the city of Wad Madani, the capital of Gezira State, up to the borders of the states of Sennar and White Nile borders and civilian city Located in the middle of Sudan at 409 meters high meter level On the bank Blue Nile Western In the Al-Gazera Agricultural Project famous, and far from the capital Khartoum About 186 kilometer (115 tendency) to the south, and is considered one of the major Sudanese cities, and it is also the capital of Al-Gazera State(Free Wikipedia)

Sample:

The study sample from Total sample of illness Kidney failure and those who are about to undergo kidney transplantation in Wad Madani city, numbering (24) patients of both sexes, the sample reached (20) patients after it was not possible to communicate with four patients, the sample consisted of both sexes males/females, (10) males and (10) females, who were diagnosed and are receiving dialysis services in dialysis centers and are awaiting a kidney transplant operation at a rate of (83.33%) of the study population of (24), in the age group ranging between (15-50) years, the sample was selected from the central hospital for kidney patients in Wad Madani city, where complete investigation and kidney transplantation are conducted, and it is noted in general few patient turnout for transplantation and Kidney transplantation may be due to the high cost, the need for post-transplant care, the lack of donors or fear for their lives, as they are often first-degree relatives of the patients.

Instrument:

The study used the Taylor Anxiety Scale; The Taylor Manifest Anxiety Scale (TMAS) is a psychological assessment tool designed to evaluate the

level of manifest anxiety in individuals. Developed by Dr. Janet Taylor Spence, the scale emerged from the need to quantify the anxiety construct in a reliable and valid manner. Originally intended for use in clinical settings, the TMAS has found application in various fields of psychology, including developmental, social, and clinical psychology. The scale comprises a series of statements to which respondents indicate their level of agreement or disagreement, thereby providing insights into their anxiety levels. The TMAS operates on the premise that anxiety can be measured as a stable personality trait, as opposed to a transient state. This distinction is crucial in understanding the scale's design and its intended application. The tool measures manifest anxiety, which refers to the observable symptoms and behaviors associated with anxiety, such as tension, nervousness, and worry. The scale's items are crafted to capture these dimensions, offering a quantitative measure of the individual's tendency towards anxiety in their daily life. Over the years, the TMAS has undergone various revisions and adaptations, aiming to improve its reliability, validity, and applicability across different populations and contexts. The use of the TMAS in research and clinical practice has contributed significantly to our understanding of anxiety and its impact on individuals' lives. By providing a standardized method for assessing manifest anxiety, the scale facilitates comparisons across studies and populations. Furthermore, it allows for the examination of relationships between anxiety and other psychological constructs, health outcomes, and behavioral patterns (Taylor Janet, 1953). In 2003, the Adult Manifest Anxiety Scale was introduced. It was made for three different age groups (Reynolds, CR, et al) The AMAS considers age-related situations that affect an individual's anxiety. The divisions include one scale for adults (AMA-A), one scale for college students (AMAS-C), and the other for the elderly population (AMAS-E). Each scale is geared towards examining situations specific to that age group. For example, the AMAS-C has items pertaining specifically to college students, such as questions about anxiety of the future (Free Encyclopedia).

validity:

To determine the validity and appropriateness of the Taylor Anxiety Scale statements for the study, the scale was presented to a group of specialized arbitrators to express their opinions and judge its suitability for measurement. The arbitrators provided comments and opinions that the researcher worked on. It has reached the point of to Validity of the scale by the alpha coefficient and Mach (0.978), and to know Internal consistency and extent consistency paragraphs with each other for Scale Anxiety, the coefficient has been calculated. The Correlation between the scores of each paragraph and the total score of the dimension It is located in, and it was

Correlation coefficients for the paragraphs are statistically significant at a significance level of (0.05) to all scale items which indicates the validity of the consistency of the test.

reliability:

The researcher calculating the reliability of the Taylor Anxiety Test using the equation alpha the reliability reached (0.978) While self-validity reached (0.988)

Processors Statistics:

The study used Statistical Package for the Social Sciences (SPSS), and the following statistical methods were used: Percentages, frequencies, and arithmetic mean., Cronbach's alpha test (Cronbach's Alpha) to determine the stability of the paragraphs of Scale, Analysis of variance Analysis (ANOVA), T-test.

Data Collection:

The researcher received approval from the Ministry of Health in Gazira state, and all data collection flowed and applied by two psychologists working at the Central Hospital for Kidney Diseases in Wad Madani after the application was explained by the researcher., they explained the purpose of the study clearly to the patients, and to their families, this study asked the participants' demographic information to including (gender-male-female, age, social status, educational level, duration of illness). The choice of these independent variables is based on several previous studios

Results:

- Result of the first hypothesis: The level of anxiety among patients with chronic renal failure who are undergoing kidney transplantation is high.

Table No. (1) It is clear anxiety level have patients with kidney failure who need kidney transplantation:

Sample	Arithmetic mean	Standard deviation	Conclusion
Research sample	**39.27**	**4.69**	**high**

From Table No. (1), it appears that the arithmetic mean value is (39.27), while the standard deviation is (4.69), and it reveals that the level of anxiety among patients with Chronic kidney failure who undergoing kidney transplantation is high.

- Result of the second hypothesis: There is no Differences in lvel of anxiety among patients with Chronic kidney failure who undergoing kidney transplantation due to gender (male, feminine).

Table No. (2) Explains T-test result In dependent Samples Test) to identify the extent of statistically significant differences at the level (0.05) Accordingly to gender:

My comparison group	Sample size	Arithmetic mean	Standard deviation	value (T)	of freedom	The value ofAPossibility	Conclusion

male	10	65.40	7.57	0.214	19	0.251	no There are differences
feminine	10	62.90	7.60				

From Table No. (2) above, it is clear that there are no statistically significant differences. at level (0.05) The level of anxiety is attributed to gender, male or female.

- Result of the third hypothesis: There is no Differences in level of anxiety among patients with Chronic kidney failure who undergoing kidney transplantation due to Age (15-20), (26-35), (36-45), (46-50).

Table No. (3) shows the results of the test. ANOVA One-way analysis of variance to determine the extent of statistically significant differences at the (0.05) level according toAge variable:

My comparison group	sum of squares	Degree of freedom	Mean squares	Value (f)	Valuepro bability	Conclusio n
Between the squares	2275.311	3	758.437	1.196	0.341.	There are no differences
inside the squares	10147.64	16	63,283			
the total	12422.95	19				

From Table No. (3) above, it is clear that there are no statistically significant differences. at level (0.05) The level of anxiety is attributed to age.

- Result of the fourth hypothesis: There is no Differences in level of anxiety among patients with Chronic kidney failure who undergoing kidney transplantation due to the level of education (My mom-basis-secondary-University).

table(4)Test shows ANOVA One-way analysis of variance to find out the to identify the extent of the existence of statistically significant differences at the level (0.05)In applying the level of anxiety according educational level:

My comparison group	sum of squares	Degree of freedom	Mean squares	Value (f)	Value probability	Conclusion
Between the squares	892.055	3	234.216	0.214	0.617	There are no differences
inside the squares	11271.45	16	543.712			
the total	12511.65	19				

From Table No. (4) above, it showed that there are no statistically significant differences at level (0.05) in level of anxiety attributed to educational level.

- Result of the fifth hypothesis: There is no Differences in level of anxiety among patients with Chronic kidney failure who undergoing kidney transplantation due to social status (single, married, divorced, widowed

Table No. (5) shows test ANOVA One-way analysis of variance identifying the extent of statistically significant differences at the level of (0.05) In applying the level of anxiety according to social status:

My comparison group	sum of squares	Degree of freedom	Mean squares	Value (f)	Value probability	Conclusion
Between the squares	1216.512	3	386.108	0.421	0.207.	There are no differences
inside the squares	10212.35	16	493.322			
the total	13002.15	19				

From Table No. (5) above, there are no statistically significant differences at level (0.05) the level of anxiety depends on the social status (single, married, divorced, widowed)

- Result of the sixth hypothesis: There is no Differences in level of anxiety among patients with Chronic kidney failure who undergoing kidney transplantation due to duration of illness (less from year- 1-3Years-4 - 5 -more)?

Table No. (6) shows a test ANOVA One-way analysis of variance identifying the extent of statistically significant differences at the level of (0.05) In applying the level of anxiety according to duration of illness

My comparison group	sum of squares	Degree of freedom	Mean squares	Value (f)	Value probability	Conclusion
Between the squares	1457.810	3	832.303	1.230	0.289	There are no differences
inside the squares	11234.12	16	582.231			
the total	12300.25	19				

From Table No. (6) above, it is clear that there are no statistically significant differences at the level of (0.05) in the level of anxiety attributed to the duration of the illness.

Discussion:

Interpretation of the first hypothesis:

From Table No. (1), it appears that the arithmetic mean value is (39.27), while the standard deviation is (4.69), and it reveals that the level of anxiety among patients with Chronic under transplantation is high. This result is consistent with the study of (Khalifa, Frikha (2017)(Ade, Sousa, 2008) (Sameeha, Alshelleh, et al(2022), (Hegazi, Sami, 2019), (Yalda Safai (2023),(Fadelmawla, Halima (2019). The results of these studies showed an increased level of anxiety among patients with kidney failure, as a study of Bokhalfa, Frecha (2017) In Algeria majority illness Palaces Renal Chronic high blood pressure anxiety the future by percentage(59%). As the study reveals, Sameeha Alshelleh, et al: (2022) More than half of the participants have depression and anxiety with a percentage of (58.3%) and (50.5%,) respectively. Moreover (A DE, sousa.2008) added the CKD is a multifaceted problem having both physical and psychological connotations for the patient. The patients suffering from renal failure often present with unusual psychological problems where treatment methods vary on an individualized basis and drug therapy is often needed in the management of such problems.

Amanda, Lee (2005) found that there were differences in the quality of life between those who had previously had a kidney transplant compared to the dialysis group, with the meaning of both groups, and this is due to the failure Renal. And kidney transplantation. means therapeutic effective for patients who They suffer from failure renal.And with that, may He suffers Recipient transplantation kidney from disorders Psychological And pressure Emotional While Related With quality Their life.Bonus on that, Then Many from Problems like difficulty Preservation on life regular after practical Planting Yaman Zeliha (2017).

The researcher attributes the increase in anxiety to CKDThe severity of the physical symptoms in patients affects their social and professional lives, and the pressure increases when a kidney transplant is needed and the resulting fears of not finding a donor with the high cost and follow-up.

Interpretation of the second hypothesis:

From Table No. (2) it is clear that there are no statistically significant differencesat level (0.05) In the level of anxiety attributed to gender, male or female. The result is consistent with the study with the result of Bokahif, Frekha (2017) In Algeria, which showed no differences same indication statistics in anxiety the future I have patients palaces renal releated to variables (Sex(Males/Females)While the study indicates that Fadalla Alla , Halima(2019) In Sudan to and from presence differences in degree of depression as a result of psychological distress accordingly for variable type, While you see the study of Al-Ghafeeli , Elaph(2018):Which results showed the existence of differences same indication Statistics in Degree of depression For variable Sex(male-feminine) and its dimensions sub (side Cognitive_emotional, side physical) For the benefit of patients females. while It indicates results study, Ahmed, And Shrouda, (2017) to presence relationship in dimension psychological between Adaptation And confront Pressures I have The injured With diseases Total Chronic with regards for wives, And not presence relationship function in dimension psychological between adaptation and confront Pressures, but study Hijazi, Sami,(2019) Its results indicated to non presence relationship function statistically in degree to improve anxiety and depression, but the study (Sameeha, Alshelleh, et al(2022)There were differences in the degree of anxiety due to gender, and females were more anxious than males.

The researcher believes that the result of the absence of statistically significant differences is attributed to gender and to the physical and psychological suffering of both males and females as a result of the severity of the symptoms of the disease. Also, the society of central Sudan is a traditional agricultural society in which the woman shares the burdens of life with her husband and the burden of treatment falls on the entire family, even

emotional participation is great for small and extended families. Also, medical services and psychological support services are provided equally to both sexes.

Interpretation of the third hypothesis:

from Table number(3) It becomes clear that it no There is Differences same indication Statistics when level(0.05)in level Anxiety for ages (15-20),(26-35),(36-45),(46-50).The results of the study are consistent with the study of Wakhalafa, Freikha (2017), which concluded that there were no differences. same indication Statistics in anxiety the future I have patients Palaces Renal Come related to Age, as found in a study by (Hijazi, Sami, (2019) to non-existence relationship function Statistically in degree to improve anxiety and depression on application The program Cognitive behavioral for patients related to Age, as It indicates study Fadelmawla, Halima(2019) until he does not existence differences in degree depression Accordingly for the age variable, however, the study of Al-Ghafeeli and Elaph (2018) found statistically significant differences in the degree of psychological resilience of kidney failure patients due to ages over forty years. The researcher Interpred result tere is no differences related to age It is clear non presence differences while related from consequences Influential on investigation ambitions from transplantaion kidney and the situation healthy Current and ideas that spin in risk all sick, and share all categories in this the matter where the fear from non presence donor, or the fear on his life that found and he is in mostly he is from relatives from degree the first.

Interpretation of the fourth hypothesis:

From Table number(4) It becomes clear that it no Differences same indication Statistics when level (0.05) in level Anxiety related to level of education.The result of the study agrees with the study of Hijazi, Samia (2019) that no relationship function statistically in degree to improve Anxiety And depression. The star on application The program Cognitive behavioral for patients back to To the level Education.More over, A study of Higazi, Samia (2019). has shown that no relationship function statistically in degree to improve Anxiety and depression. The effect on application The program Cognitive behavioral for patients related to the level education, and this result differs from the study of Al-Ghafeeli, Elaph (2018), which concluded that there is no stastical differences in degree of depression is one of life's stresses. I have patients with chronic renal failure. For level educational for the In favor of of Patients Males. The results of the study of Awad Allah, Hala (2008) show that chronic renal failure effctive has a significant impact on the cognitive state in all responses, as patients suffer from drowsiness, poor attention, poor concentration and memory, which leads to disturbances in mental processes.This affects their professional side,

especially those who manage a job that requires focus, attention and memory among learners.

The researcher attributes the result of the absence of statistically significant differences due to the level of education to the suffering of all sample members from the physical and psychological effects of kidney failure among sample members. Also, most sample members, according to the educational level, were loweducation, as university education did not exceed (10%) of the sample members, as the percentage of basic education reached (40%), followed by secondary education at a percentage of (35%), then the illiterate at a rate of (15%), and university education at a rate of (10%). Therefore, the educational level was not statistically significant.

Interpretation of the fifth hypothesis:

Table number (5) reveals no statical differences in level Anxiety with CKD in social status (married, not married, absolute, widower) The result of the study is consistent with the study. Bok alfa, Fresca(2017)Which concluded that there is no statical differences in future anxiety, I have Patients Palaces Renal Come back the condition Social status (married, unmarried, absolute, widower)I disagreed with the study Al-Ghafeeli , Elaph(2018)The results indicate the presence of differences same indication statistics In the degree of depression condolences for the case Social in favor of unmarried people. No differences same indication statistically in level anxiety returns for the case Social status (not married, married, absolute, Widowed) attributed to the suffering of all types of social and family physical and psychological conditions from the effects of kidney failure, and according to the details of the sample individuals, the distribution of the condition reveals Social rate Married(40%)The percentage of unmarried people(35%) absolute By percentage(15%)And widow By percentage(10%)Where only (40%) of those who are married and have stable families, this reduces social support within the small family, which is stronger than the social support for extended families.

Interpretation of the sixth hypothesis:

From Table No (6) it is clear that there are no statistically significant differences at level (0.05) at the level of anxiety attributed to the duration of the illness, the result of the hypothesis agrees with the study of Fadl. Molla, Halima (2019) Which I came to the conclusion that there is no differences in the degree of depression resulting from psychological stress associated with the disease depending on the duration variable washing, The results showed study Awad Allah, Hala(2008) that Chronic kidney disease has a significant impact on cognitive status. A result to Chemical changes that occur in the brain of patients with kidney failure she adds Mayo Clinic (2023).The stages of the disease and its physical symptoms increase with progress illness

kidneys, Where symptoms appear nausea vomiting, and cramps muscular, and loss appetite, swelling in feet and ankles, dryness Itching in skin, narrow in breathing, difficulty in sleep, And urination either a lot very or a little very. But This is amazing symptoms usually what Show in stages suffix. .Study indicates Lech, Majdoliana (2023)There are differences same indication statistics in intensity features character in stages treatment different, as well as It increases impact factors the result on illness kidney chronic on Expression on Features character in Stages Suffix from treatment, lost changed Characters Patients who They suffer from illness kidney chronic with stages suffix from treatment and I was affected by factors social and demographics and clinical.

The researcher attributes this result to the effects of kidney failure and the great psychological suffering at the beginning of the disease, at the first diagnosis, and the shock of the injury, and in the later stages .and Physical suffering increases as a result of the suffering of dialysis, social and professional impact, and increased economic burdens. Psychological pressure increases with the need for kidney transplantation. All of this makes psychological and physical pressures dominant in all stages of the disease, which created no statistically insignificant differences in the level of anxiety among the individuals in the study sample.

Conclusion:

The study aimed to reveal the level of anxiety among kidney transplant patients at Wad Medani Teaching Hospital in central Sudan, and its relationship with some variables (anxiety level, gender (male/female), age, social status, educational level, duration of illness), used the study is a descriptive approach for a total sample from the Central Hospital in Wad Madani city in central Sudan, showing results to rise level Anxiety between Individuals The sample as a general feature, on the other hand, the study found no differences in the level of anxiety between chronic kidney disease patients under kidney transplantation for gender (male/female), the study discussed the attribution of the absence of differences between fetuses in anxiety to the psychological and physical suffering of all sample members. The study also found that there was no presence differences in level Anxiety between satisfied total chronic under transplantation, Moreover, The result of the hypothesis was discussed, and the study showed that there are no differences in the level of anxiety between chronic kidney disease patients undergoing kidney transplantation for educational level (illiterate, primary, secondary, university), the study results also revealed that there is no differences in level anxiety between satisfied total Chronic under agriculture total It is due to the marital status (married, unmarried, single, divorced). Finally, the results of the study showed that there is no presence Differences

in level Anxiety between Satisfied Total Chronic under agriculture Total It depends on the duration of the illness.

The findings of the study have important implications for both theory and practice It also shows the physical and psychological suffering of patients CKD. They need to know the type and extent of psychological pressures associated with them and provide psychological and counseling services to patients and their families. The study results also show the impact of factors affecting anxiety factors such as the patient's gender, age, educational level, social status, and duration of illness. The study recommends designing psychological counseling and therapeutic programs for chronic kidney disease and their families, along with social counseling programs that reduce the factors of isolating the patient from his social and professional environment.

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